DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

WORK FOR THE SEASON.

JULY is, usually, the hottest month of the year, and the most busy with the farmer, as he often has much to do to his tilled crops to promote their growth by proper culture and secure them against drought and weeds; and this is the principal season for securing his early harvest. In this month nature assumes her most gorgeous and beautiful appearance. Vegetation is in full luxuriance. The fields wave with grass and grain, and the crops on tillage begin to cover the land with green.

Weeds should be thoroughly destroyed before haying, else they will not only choke the plants and rob them of their food, but they will ripen seed for an abundant crop another season. Many weeds that are among grain crops, should be pulled out as soon as they begin to blossom.

Stirring the Soil not only greatly promotes the growth of plants, by rendering it fine and permeable to the tender roots, but this process is one of the best protections against drought, as the loose soil prevents the escape of moisture by evaporation, which is invited upward from the moist soil to the surface by the influence of the sun. Land not tilled will dry down 8 or 10 inches in depth, while that often stirred and kept finely pulverized at the top is moist within a few inches of the surface.—We have tried the experiment often on lands adjoining. Compact soil serves as a conductor of ascending moisture, which passes off by evaporation. But the fine loose soil at the surface holds moisture like a covering of boards, straw or other litter.

Work Early in the Morning.—In this hot month, retire to rest early, and begin labor quite early in the morning, while the air is cool and refreshing; and in the haying season, which allows of no rest at noon, work moderately in the latter part of the forenoon, to allow the system a little respite from severe toil.

Drinking Cold Water.—Several persons lose their lives every hot summer by drinking freely of cold water, when over heated; and become seriously injured, and sometimes do not recover for months. Great caution is necessary in the use of cold water at this hot season. When very hot and thirsty, wash the hands and wrists in cold water, rinse the mouth a few times slowly, then swallow a little water, and drink lightly at intervals till thirst is quenched. This mode will soon give relief, and with more comfort than in taking large draughts of cold water, to say nothing of the danger of such recklessness of life and health.

Grain.—When grain is fit for the sickle or cradle, it should be secured as soon as possible, as a great loss may attend even a short delay, from storms or other causes.

Haying.—This is the principal business with the New England farmer in July. Most all the grass on the farm generally needs cutting nearly at the same time, or in the course of two weeks, yet many farmers cannot do their haying in less than a month, especially, if the weather be unfavorable. Therefore it is of great importance to begin early, and cut some grass before perfection, rather than lose by allowing the last to stand a week or two, or perhaps three weeks too late. As far as convenient, mow early in the morning, and as soon as the dew is off, and the ground warm between the swaths, spread the grass, and shake it up soon after dinner. This will be dry enough to rake convieniently in the afternoon, while the warm sun is upon it. By opening and turning the next day, it will soon be ready for the barn; and not be injured by exposure to a scorching sun, after it is dry. It is best to make hay partly in the heap, as the sun destroys its sweetness after it is tolerably dry. When clover, partly cured, is put into heaps, the curing process still goes on, even by night; and the moisture becomes equalized by passing from the damp stalk to the dry leaves, and a little exposure to the air and sun will complete the process, and in this way the leaves and other fine parts are saved. Grass cut late in the forenoon or early in the afternoon, may be partially

made so as to be liable to injury from dew, and yet too heavy to rake. In such cases, let it lie in swath, and turn it over before the dew falls. In all cases rake hay while the warm sun is upon it, and not after the dew begins to fall. Cut clover when in full bloom, which is unually when about one-fourth of the heads have turned brown, as there are at that period many buds that have not blossomed. There are different opinions as to the best time to cut herds grass. Some prefer the season of its bloom, others that in which the seed is nearly grown, approaching the condition of corn when fit to boil. We incline to the latter opinion, from experience and observation. The greater part of farmers give their opinions in favor of the earlier period, but their practice is decidedly in favor of the latter; for they cut but very little grass till it is in full bloom, and they often continue till the seed is ripe. This is not always a case of necessity, for if all ready, they will not begin till within a few days of their favorite period, but continue their operations one, two or three weeks beyond it. As many farmers salt their hay too much, an annual caution on this point is necessary. There should be no more salt put on the hay than the animals need while consuming it. All beyond this is injurious, creating thirst and excessive drinking in cold weather, and producing various diseases among cattle and sheep, as has been abundantly proved. Twelve cows, consuming a tons of hay in a week, would get half a peck of salt, if only this quantity was put on each ton. Now would any farmer think of giving to twelve cows more than two quarts of salt twice in a week, and in the winter season, and compel them to eat it, by adding it to their food? Is not this too much?

AMERICAN POMOLOGICAL CONGRESS,

Held in Cincinnati, Oct. 2, 3 and 4, 1850.

We have received the report of the doings of this association published by the O. State board of Agriculture. But very little business was done by this Congress. The merits of only a very few fruits were considered; and as this convention was mostly made up of Western members, the opinions expressed are of very little interest to Eastern cultivators. Even our favorite apples, the Baldwin and Rhode Island Greening, did not receive favor with this Congress. There was no member or delegate present from New England.

Dr. W. D. Brinckle, of Philadelphia, was chosen President; F. R. Elliott, Ohio, P Barry, N. Y., and I. A. Warder, Ohio, were chosen Secretaries. A motion was made and carried, that a committee be appointed to report upon the expediency of establishing American Pomological and Botanical Gardens. After deliberation, the committee reported as follows:

That it is expedient to enter upon the enterprise suggested in the resolution, and to carry it out.—The spirit of the age favors the project, and this project needs only a Northern, and Southern, and Eastern, and a Western establishment of the kind, to become one of the most important and most useful bodies of promoters of the pleasure and profit of mankind. The committee beg leave to be allowed time till the next meeting of the Congress to report further.

Dr. J. A. Kennicot, of Illinois, desired to introduce the subject of the culture of the grape and the apple, as connected in the manufacture of wine and cider, with the cause of temperance. The remarks were to effect that he considered the cause of temperance advanced by the introduction of native wines at a cheap rate—that they may take the place of distilled liquors.

List of Pears Rejected.

Spanish Bon Crieton, True Gold of Summer, Hessel Summer Rose, Pettit Muscat, Roussellet of Rheims, Princess of Orange, Ah! Mon Dieu, Bleeker's Meadow, Huguenot, Michaux, Beurre Knox, Franc Real d' Hiver, Clinton.

The "Belle of Brussells" was proposed to be placed on the rejected list, but several gentlemen seeming inclined to give it further trial, it was not entered then.

List of Pears that promise well.

Paradise d'Antomne, Stevens Genesee, Onondago or Swan's Oranges, Doyenne Gabault, Nonveau Poiteau.

List of Apples Rejected.

Egg Top, Cheeseboro' Russett.

List of Apples that promise well.

Northern Spy, Melon, Mother, Hawley.

The Stevens Genesee Pear was regarded by many of the Congress as worthy general cultivation, but there being one or two objections made, it was put on the list as promising well.

Mr. Saul then introduced the Belmont or Gate Apple for remarks. Mr. Wood spoke in favor of it; so, also, Mr. McIntosh.

Mr. Saul spoke of following apples as promising well, and worthy of culture, viz: Eustis or Ben Apple, Monmouth Pippin, Peach Pond Sweet, and Sturner Pippin.

A resolution was passed, That when this Congress adjourn, we do so to meet in the city of Philadelphia, on such a day in the month of September, 1852, as shall be hereafter designated by the President of this Congress.

ACKNOWLEDGMENT.—From John W. Shaw, of Kensington, N. H., a liberal present of fine Russet apples, large, fair and sound. Mr. Shaw remarks that they are called Shaw Russet in that region. They are a true type of the old Roxbury Russet, and a very handsome specimen, for which we are much obliged to our kind friend.

GARDEN ROLLER.

The roller represented here is made entirely of iron. The cylinder is cast in two parts, each 1 foot long and 20 inches in diameter. This admits of easy turning without dragging. The handle is of wrought iron, and confined to the arbor. Inside the cylinder, and attached to the arbor, is a counterbalance to the handle, which adds to the weight, and causes the handle to stand upright when the roller is not in use. The garden roller is sometimes made of stone.

For the New England Farmer.

CORN FOR FODDER.

Mr. Editor:—Corn for fodder is now raised by nearly all the farmers in this vicinity; not however to cure for winter use, but to feed out to cattle, and particularly to milch cows, during the latter part of summer and the beginning of autumn, when the feed in the pastures has become short and dry, and before the grass in the fields has acquired that growth which it should have before the cattle are turned into the "fall feed." They all cut a sufficient quantity of hay to keep their stock well through the winter; and for this reason I do not think it is advisable to raise it for winter use. I think the practice of raising it, to be devoured in the green state, is a very good one, as it greatly increases the quantity of milk, and can be produced by very little labor or expense. In a very dry time it sometimes becomes almost a means of sustenance to the hungry cattle who can barely pick up a living in our pastures, which, in our wettest and most favorable seasons for grass, are *none too good*, to say the least. In a few instances our farmers have sown the corn broadcast, but I do not consider this a good way. The best way is to sow it in drills three feet apart. Some sow it quite thick, others quite thin; but I should recommend thick sowing, as the quantity of fodder is larger and the quality decidedly better; and therefore but little refuse is left by the cattle. When the corn is ten or twelve inches high, go through it with a cultivator, and the weeds can make but little headway afterwards, even if it is not hoed at all, so rapid is its growth. The ground is soon completely covered, and the weeds, locked in their prison-house, very soon "pine away and die" for want of the necessary nourishment from the sun and air, which alone can bring them to maturity. Still I should be in favor of the hoeing, as it is no doubt in some degree beneficial; nor is this all, it also gives evidence that the field is under the care of a *neat* farmer. That is a consideration worth not a little.

When I first commenced raising fodder corn, and saw what a very great quantity of it could be produced in comparison to any other fodder crop, on the same extent of ground, and with the same cost in regard to manure, I could not free myself of the impression that such a heavy crop must necessarily, as a matter of course, exhaust the soil to such a degree as to greatly lessen the real value of the crop, after taking into consideration the vast amount of nutriment it must require to drive it ahead at such a rate. But I believe it is now generally conceded that it is *not* a great exhauster of the soil. I had never heard any opinion expressed on the subject at the time; but now my views in regard to it have changed. This change has not been brought about by the sayings of others solely, but in part by my own experience. In the year 1847 I had a small piece of ground of about half an acre under moderate cultivation, which was considerably shaded by fruit trees; so much so as to render it an unsuitable place for the cultivation of corn or any of the different kind of vegetables. For this reason in part, I concluded to plant it with "cow corn," which I did in the latter part of the month of June. The manure which I made use of, was the scrapings of the barn-yard, and, I should judge,

composed of about three parts of loam and meadow mud to one of animal manure. This weak compost was applied in the furrow, with not a very lavish hand, considering what it was composed of. The result was, I had a stout crop of fodder for my cattle. The following year I gave about the same quantity of manure, of perhaps a little better quality, and again planted with "cow corn;" the crop was good—about the same as the year before. The next year I sowed it down to grass, sowing barley at the same time. No manure was applied. The barley grew finely, and a good crop was realized, where it was not too much shaded by the trees. Last year a good crop of clover was obtained; and now the grass looks exceedingly well and gives good promise of a large yield. No top-dressing has been given since the raising of the fodder crop.

These results settle the question satisfactorily to me. I am convinced that corn fodder exhausts the soil to but a small extent; therefore I believe it to be a very profitable and desirable crop, all things considered. What say you, Mr. Editor? and what say you, brother farmers? J. W.

Winchester, Mass., June 14, 1851.

Remarks.—Where hay is generally plenty, and the crop of grass looks promising, there may be no advantage in raising corn for winter food for cattle; but in all parts of the country we are liable to severe droughts, and when they occur early in summer they sometimes cut short the hay crop. In such cases, a deficiency in the hay crop will be known in season to raise a good crop of corn for dry fodder. This would be far better than to reduce one's stock at a time when it must be cheap.

A great many farmers have thought that fodder corn must be a very exhausting crop, from the large amount of nutricious food produced to the acre; but this was mere hypothesis. Practice gives a different opinion, as this crop bears a succession well, as our correspondent has shown; and other crops succeed well after it. So it is only a moderate exhauster; or considering the large crop it yields, it is only a small exhauster. The corn fodder crop collects nearly all its nutriment from air and water, and as it does not mature seeds, there is no draught upon the phosphates and other substances that are usually rather scarce in the soil, especially in old soils.

For the New England Farmer.

SAVING MANURE.

How shall I make the manure?

Do look at your barn-yard. Your ten cows are allowed to scatter their manure all around the yard at night, the fowls come in next day, and spread it quite evenly over the surface, while the sun dries up about the whole of its value.

What can I do?

You can do nothing worse. If you yard your cows, why don't you have a shovel, or a ten-tined fork, which is a great deal better, and clean up the yard every morning? Then you might throw some fresh loam on to the pile to cover it from the sun. In this way you might get quite a pile of good manure by September, which would come handy about the fall-seeding.

What do I think about tying up cows at night?

The best plan in the world to save labor and manure. The cows will go at once to their stanchions, and may be fastened in a very short time. The milker can sit down and do his work without being obliged to get up and travel the yard over, through the pond-hole, and over the dung-heap, a score of times. It makes a hired man good-natured, don't it, to chase a restless cow? Haven't you seen the stool fly many a time, only making a bad matter worse? Now, were the cows all tied, no such exercise would be necessary, when the milker oftentimes is weary. Cows may be milked in about one-half the time in the barn. Heifers are more easily managed. They come to their winter places; they see other cows milked, and seldom make any opposition. Now look at the first summer, with a heifer in the yard, and is not there work and vexation in milking her?

You save much labor in stabling your cows, but you save more in the manure. I hope you have a barn-cellar; if not, begin to dig to-morrow; get some screws, and raise up the barn a few feet—build what wall you can, and then dig out under your stables. You need not cart out half the earth at first, for no matter what it is, you can mix it with the strong manure. Having prepared an ample space for the solid excrements, see that your stable floors have cracks sufficiently open to let the liquid pass at once through, and not stand upon the planks to waste by evaporation. Now, neighbor, just throw in soil with this mass, and you will have, by September, a heap worth four times what you would have if you left your cows in the yard. I have seen this proved with my own eyes.

How shall I manage my horse stable?

Why, with greater care. The ammonia is freely generated. The manure should be mixed with soil under the stable every two or three days. It should never be allowed to burn nor to heat more than enough to decompose the straw.

You may keep your stable sweet by having a keg of plaster of Paris near, and after cleaning out, sprinkling a handful over the floor. The rankest smell may thus be at once abated. Where does this pungent gas go to, do you suppose? All absorbed by the plaster, and held there for hungry vegetation.

Save, save your manure. Swell the compost heap and your purse together. Enrich your land, and your land will enrich you. B.

Concord, Mass., June 10, 1851.

A Cure for Poison.—If a person should be stung by a bee or other insect, rub some spirits of turpentine on the place, and the pain will cease in a minute. It is said that pain arising from the bite of a copperheaded snake may be arrested in a few minutes, by the continued application of this article; and from my own knowledge of the effects, in other cases, I have not the least doubt of it. The effect of poison is to contract the blood vessels, and prevent a free circulation; the natural consequence is pain and inflammation immediately. Spirits of turpentine, by their penetrating and expanding qualities, soon overcome the difficulties.—*Far. Cabinet.*

☞ Science must be combined with practice to make a good farmer.

For the New England Farmer.

OLDEN TIMES.

Mr. Cole: — Sir—In reading one of your numbers of the Farmer, I noticed a communication from Dr. Silas Brown, of Wilmington, (which is my native town,) who is a highly respectable and scientific as well as a medical gentleman; he was not a native of the town he now lives in; his father lived in Tewksbury, in that part of the town adjoining Wilmington, a very respectable farmer, possessed of a very good property, for those days. My father lived in that part of the town adjoining the above town of Tewksbury. Their farms were about two miles apart, so that the families were acquainted with each other. I never had much personal acquaintance with the doctor, being some few years older than he is, and having been absent from my native town more than half a century. He has noted to you some of the reminiscences of our younger years. I fully agree with him in the mode of going to market, and having the advantage of a few more years than he has, can state some items a little further back. I went to market before the bridge at Charlestown was built; we went to Charlestown, put our horses up in the cheapest way we could, some times carrying our own hay; then taking our wallet or basket on our shoulder to the ferry way. The price of ferriage was two coppers, and no carriages were admitted into the boat except chaises.

After leaving the boat, we were very frequently asked what we had got for sale. One little anecdote I will mention. My father had relations in Boston, and my sister went to visit them for a week or two; she packed her wardrobe in a pair of saddle-bags; she went with a cousin of my father, who was of rather an eccentric turn of mind, although not uncomplaisant. After leaving the boat, he carrying the saddle-bags, they had not proceeded far before the question was asked, "What have you got to sell?" the reply was, not anything. A little further on, and the same question was asked. Being willing to have a little sport, she replied, "Nothing but a little paper money;" meaning the old paper currency that the revolutionary soldiers were paid in. Still further on, "What have you got to sell?" "Nothing but a little ragged paper money." The questioner willing to participate in the joke, "Well, how do you sell it?" "Why, two pence a penny." So they marched on to the residence of our friends; bills of the above were in circulation as low as six pence. With respect to going to market on horseback, when we carried butter in warm weather, we used to go chiefly in the night, and to prevent the warmth of the horse from operating on the butter, we used to put some hay into a wide bag, and flat it down, and put it on the saddle, and the butter on the hay, and then mount the horse and pace off to market. If we were a little belated, we used to ride under the trees and break off small branches, and hold them in our hands on the sunny side of the horse, to keep our article cool, until we arrived at the place of sale.

The above was the general mode of going to market in my young days. I will now say something about the cranberry business that has transpired under my personal knowledge. Cranberries were the spontaneous production of the meadows in Wilmington; in patches, some large crops were grown, but in my young days they were worthless. They could not be sold. When a lad, I gathered some, and going to Boston, I took half a bushel with me; I lugged them on my shoulder after leaving my horse in Charlestown, and offered them for sale, but no one would buy. After some time I went into a little shop a woman tended, and offered my cranberries. She did not seem to want them, but said she would give me eight pence in barter for them, and glad was I to leave them.

One little anecdote I will relate. There was a neighborhood in Woburn which we passed through on our way to Boston, known by the name of Newbridge; there were several families in it by the name of Thompson, who would often put little jokes upon one another, all in good humor. One of them had considerably many cranberries; he was a market-man, and had a horse and cart. He concluded to gather some cranberries and try the sale of them, he gathered six or eight bushels of them, and carried them to Boston and offered them for sale all day, but no one would buy at any price. At sun down he took his cranberries down to the dock and turned them all in, and proceeded homeward. The next morning, one of his neighbors came to inquire about the sale of the fruit, and asked him if he turned his cranberries. He told him that he did, but did not seem inclined to say much about it. His neighbor had cranberries too, so he went home and gathered some, not as many as the first one, and went to market with his, but meeting with no better sale, stored his and came home. He went to the former to know where he turned his; he asked him how many he had; he told him, but there were not as many as the other turned into the dock; he told him if he would gather as many more as to make up the number of bushels he had, he would tell him, as he was sure he could turn as many more as he carried the first time to the same place. So the one who had the less number of bushels, made up to the greater, and then went for the desired information, and was told by the other, after waiting all day, he went to the dock and turned them in, and no doubt he could do the same.

Some few years after, I had two brothers living in Duxbury, Mass., who were a little concerned in navigation; they owned a sloop of some sixty of seventy tons burden; they chartered her for Baltimore. The captain was from some town on Cape Cod; a middle aged man, who seemed to understand his business. He learning that there were cranberries in Wilmington, applied to us to buy the fruit. Having a brother older than myself at home, we gave out word that we would buy cranberries. "Well, what will you give per bushel?" "Why, a pistereen or twenty cents per bushel." The people thought it rather low, but they went to gathering and bringing them in at that price until we were obliged to stop buying, and when they were ready to take them on board the vessel, I went with four oxen, and we hired another man with his team of one yoke of oxen and one horse, and were quite fully loaded with the fruit; novel loads as ever were driven into Boston, for they were the first ox loads of cranberries that ever I knew or ever heard of before going to Boston. The vessel went and made a good voyage of it, and from that single shipment of cranberries grew the immense, profitable trade and culture of the cranberry.

The above purchase and carrying to Boston of the berries took place about sixty years since; I only speak from recollection, as I have no date to refer to. You will find by my writing that I am an old

man, and this is probably the last time you will hear from your humble friend.

Yours respectfully, JAMES WALKER.

Fryeburg Island, Me., May, 1851.

For the New England Farmer.

BIRDS—BE KIND TO THE BIRDS.

I have been instructed by the example of the late Gov. John Cotton Smith, of Sharon, Conn., in providing accommodations for birds to build their nests in his garden, by fastening up boxes on poles fixed in the ground in various positions. The robin, wren, bluebird, and phebe, seek places sheltered from rains and storms for their young, and may be allured to the little houses constructed properly for their use. And they may be allured to these resorts by gentle manners and kind treatment, and become confiding and familiar. They consume incalculable numbers of various insects, that would otherwise prey upon fruits and vegetables, especially when rearing their young. It has surprised me to see what a multitude of these "creeping things" a single chipping bird has brought to her nestlings in the woodbine, fronting a piazza by my door, while her gaping chicks were under her nursing care, till duly fledged and ready to try their own little wings and learn to provide for themselves.

Before sunrise the robins are wont to run over my garden and pick up the grubs and worms that have not returned to their concealment in the earth, after their nocturnal depredations; and with the industry of various birds, the firebird, the oreole, the light colored yellow-bird and others, I have been greatly interested, as I have seen them inspecting the blossoms of fruit trees and gathering insects from branch to branch. To their songs and beauty, so charming to the eye and ear, they add the benefit of a service, which human skill cannot achieve.

There is a branch of education sadly neglected by many parents; that of kindness and gentleness to innocent animals. The noxious and mischievous we may rationally destroy, in self-defence, but what besides savage propensities can induce the habit of youth so prevalent, of stoning and shooting the birds that so winningly court our friendship? Advertisements from country boarding-houses, I have read, holding out inducements to city visitors, from their favorable situation, to test their ability in warring upon the warblers of the forest. Stringent laws, strictly enforced, should stop this cruelty, crime and mischief, so fiend-like in its nature, so destructive to the moral sensibilities of the heart.

Our best protectors are destroyed yearly, by thousands. What though the robin loves our cherries as well as we; forbid him not a share in our own common Father's bounty, unless you have ingenuity to elevate from the top of your trees some object to deter his approach. Even the carrion crow is a useful fowl, a common scavenger, a diligent destroyer of grasshoppers and crickets, and farmers need not destroy him, when so many innocent contrivances will prevent his visiting his corn-fields.

Again I say—"Be kind to the birds." Tame them by showing them friendship. Wrens will kill the millers that murder bees, and therefore, just make them houses. A small oyster keg with a two-inch hole for entrance, and fastened upon a four-foot stake, with a projecting bush for a porch, has suited a pair of them in my garden right well, this spring. A word to the wise suffices.

J. LEE.

Salisbury, Conn., June 7th, 1851.

ERRORS IN COMPOSTING MANURE.

The farmer's manure heap is usually the receptacle for every substance that has served its original purpose; but it is a mistaken idea that everything thrown in there will serve a useful purpose. We may, however, just say here, that this error has considerably influenced farm practice. Belief in the alchemy, rather than the chemistry of the farm-yard, has led some persons to cart soil into the manure yard, and carry it back again with the dung to the very field from which it was taken; adding materially to the bulk and expense of the manuring. They presumed that they added to its value, but the effect of the earth upon the farm-yard manure would be merely to retard decomposition, and thus might be a loss or a gain, according to the circumstances of soil and the crop.

Animal substances, offal, and fish of every description are also very unprofitable applied to farm-yard manure. The natural tendency of animal substances to enter into putrefactive fermentation is well known to be greater than that of vegetable substances. By placing them in the manure heap, we, in a father degree, facilitate the quality in which they naturally excel, and the tendency of which is to rob them of their most valuable element, nitrogen. Judicious practice should avoid this error, by adopting, if possible, a system having an opposite effect.

Lime is one of the substances which it is also an error to use with composts in which we have farm-yard manure. It is equally an error to mix lime with any compound rich with ammonia. The tendency of lime, in all composts, is to promote decomposition and to waste nitrogen, which escapes, by union with hydrogen, under the form of ammonia, which is the very treasure of the dung heap, and of most other manuring substances.—*Prof. Norton's Agriculture.*

THE SOIL.

An acre of soil one inch in depth weighs about 100 tons. The roots of clover descend from 20 to 30 inches in search of their appropriate aliment; and I have traced them to a greater depth. By estimating the mass of earth to the depth of only 20 inches as available for agricultural purposes, we have 2000 tons of soil and subsoil in an acre. Now, so small an amount of gypsum as 50 pounds has added over 1000 to the clover hay grown upon an acre; and 100 lbs. have increased the crop more than 2000 lbs.

Where did the matter come from which formed this immense gain in the weight of the harvest? 100 lbs. of plaster of Paris really contain a fraction less than 80 of lime and the oil of vitrol; the other 20 being what is called "water or crystalization." As gypsum operates with marked effect on limestone soils in Western New York, where the use of lime alone does no good whatever, I am induced to regard the sulphur in this fertilizer as the element that really adds so largely to the growth of vegetation. Doubtless it will appear incredible to you that 18 1-2 lbs. of available sulphur in 100 of gypsum, should cause the organization of some

950 lbs. of carbon, 800 of the elements of water, and 50 of nitrogen, attended by the extraction from the soil of about 150 lbs. of incombustible soluble salts. Whatever effect the sulphate of lime may have on the growth of a ton of dry clover, the above is not far from its composition. Clover is a plant that contains a good deal of sulphur; and salts having this mineral as one of their constituents, are extremely liable to be dissolved out of the surface soil by tillage and cropping. Thus, when sulphuric acid combines with magnesia, it forms Epsom salts. With soda, it forms glauber salts; with alumina and potash, it forms alum; with iron, copperas; and with lime, gypsum. Except the last, all these salts are well known for their ready solution in water, and it is obvious that they do not, as a general thing, abound in unmanured, cultivated lands. So long as the sulphic acid lasts from its combination with iron, either as a sylphuret or sulphate, or with alumina, (the basis of all clay) limeing will suffice to form gypsum in the soil; but after the sulphur is consumed, or nearly so, then gypsum, not lime, must be added to the soil. Similar remarks will apply to the use of bone dust, or burnt bones and lime. So long as phosphoric acid exists in the surface of the earth in combination with alumina and iron, the application of simple lime will suffice to form bone earth; but when this acid is measurably consumed, then bone dust, guano, or phosphorus in some other manure, must be applied to the impoverished land to remove it.—*Dr. Lee's Address.*

MULCHING.

A "practical mulcher," writing from Dedham, Massachusetts, whose communication is published in the *Horticulturist* for May, says:

I regard *mulching* as *our* prime and especial necessity, *the* most indispensable thing in North American Agriculture. For in the first place, the operation of mulching, or covering over the surface of the ground, prevents the evaporation of the moisture that is so requisite to the rooting of new plantations, to the development of luxuriant foliage, and the production of perfect flowers, and fair, juicy, large sized fruits. Again: the operation of mulching not only prevents, to a great extent, the escape of moisture, but also, and what is of greater importance, the passing away from the earth of the volatile gases that are held in solution in the water, and which, sucked in by the minute mouths of the radicles or spongioles, give nourishment to the plant or tree.

That mulching is of great value in the case of young and newly planted trees, by preventing the process of evaporation, is universally admitted in theory, and to a certain extent carried out into practice; and yet but few seem to be aware of its value in retaining the nourishment as well as the moisture in the earth, and thus, both those means, contributing to the luxurious and healthful condition of plants and trees already rooted and well established in the soil. But observation, however, as well as actual experience, has fully convinced me, that trees will not only put forth more luxuriantly, and grow more vigorously, but that the fruit will be far larger, fairer, and jucier, for mulching during the hot season. And I hazard the observation, that in the culture of pears, and certain kinds of apples, such as the Roxbury Russet, that are generally small and knurly on a gravelly bottom, careful mulching is almost equal to a clay subsoil.

And here let me say, by way of parenthesis, that in the cultivation of these fruits, it is not, I think, any nutritive element in the clay soil, but only its power of retaining moisture, that gives it the advantage over a gravely substratum. By carefully mulching, however, I do not mean a wisp of straw, hay, weeds, or small brush, nor a shovel of spent tan, hub-chips, or saw-dust placed just round the trunk of the tree, but a covering of the ground, if possible, as far as the roots extend. There are some absurd people, who seem to think, if we are to judge them by their practice, that somewhere at the butt of the tree is a great mouth in which the tree takes its food and drink; and accordingly, they put all the nourishment, whether liquid or solid, "right round" the trunk. Whereas the truth is, the numerous little mouths that drink in the moisture, and the nutritious elements that are dissolved in it, are in the little spongioles that form the very terminations of the radical branches; and our course of treatment should be based upon this fact, in watering, manuring and mulching.

Mulching, then, in the first place, prevents, in light, gravelly soils—and in dry seasons in all soils—the evaporation of the moisture necessary to that flow of sap, that shall make a luxuriant growth, fine foliage, and fair, large, juicy fruit.

And second, as the elements that nourish the tree are contained in the moisture in solution, and a dry state of the earth must thus cut off the supply of food, mulching actually nourishes the tree. In proof of this, I might, would my space permit, adduce numerous facts; but experiments are so easily tried, that such evidence is hardly necessary here.

In conclusion, as the season for planting flowers, roots, seeds, &c., is at hand, I must say one word in favor of mulching for them.

Mulch your dahlias, if you want free, rapid, vigorous growth, and full abundant bloom. Much the best substance or mulch for this purpose is the soft, spongy meadow moss, though leaves and coarse sedgy meadow hay will do. I have planted two rows of dahlias, side by side, trenched them alike twenty inches deep—manured them alike, and the row that was kept carefully mulched, out-grew and out-bloomed the other, and put it altogether to shame.

Mulch your flower seeds—and what do you mean by that? I mean that flower seeds fail to come up, either from a deficiency or a super-abundance of moisture, both of which extremes are obviated by this process.

When you plant your seeds, cover them over with the same spongy moss spoken of above. And, that I may be perfectly understood, here is my receipt for planting flower seeds. Make the earth very fine with a garden knife, or a common case knife. Scatter your seeds, if small, over the place thus prepared; if large, bury them a little, press the earth upon them; spread your damp moss, and clap a flower pot or pan over them. When your seeds have started, lift up the pot a little by putting a stick or stone under the south side, and as soon as your seedlings look green and strong, take away the moss, keeping the pot or pan handy against a late frost or chilling wind. In this way you will rarely have to complain of your seedsman; and you may have early plants and the most delicate kinds without a hot-bed. My friends are putting the

continual query—"How do you make all your seeds come up and grow?" This is my secret, and in Prof. Lindley's book you will find it more in detail. Let me say in conclusion: Mulch new plantations, if you wish your trees to live and grow. Mulch your young trees if you want them thrifty and luxuriant. Mulch your old trees if you desire fine foliage and fair large fruit. Imitate nature in the fields and forests, who gathers a bed of leaves and moss about the roots of her trees, and follow the advice of an old mulcher.

NATURAL HISTORY OF THE CURCULIO.

St. Louis, Feb., 1851.

Mr. Editor:—By inserting the following you may save some one the time, expense and disappointment I have experienced in the last four or five years, in following out the hundred and one remedies in guarding against the attacks of the curculio.

Last year I varied my mode of warfare by spreading a thick coat of cement on the ground under thirty-five plum trees, extending it to the full size of the top of the tree. As soon as the plum made its appearance from the blossom, say about the 10th of May, I commenced jarring the trees every morning and evening, and continued to do so until the 1st of August, and as the insects fell upon the cement, killed them. The first three weeks, the average number was not far from fifty per day. From the 1st of June to the 20th, nearly one hundred per day; after which time they gradually diminished.

Now for the result: From the thirty-five plum trees, comprising fifteen choice varieties, I saved only about two bushels.

It has been argued by many, that this insect has great instinctive powers, and will not deposit its eggs where the fallen fruit is likely to encounter a pavement.

I know nothing about your eastern or northern curculio, but I can assure you, Mr. Editor, no such repugnance is felt or known by this insect in Missouri, and further, that no pavement ever invented, where curculios are numerous, will guard against their attacks, unless extended to every fruit tree in the garden or orchard. It is wholly inconsistent with the nature and habits of this insect, to suppose that paving under a few trees will protect the fruit, while others near by are unpaved, for the simple reason, that the curculio attacks nearly every description of fruit. The nectarine and the plum are their favorites, but the apple, pear, peach, apricot, cherry and grape, are all subject to their attacks, and all serve absolutely as a means of reproduction.

I have taken the above mentioned fruits separately, placed each in different boxes of earth, and from four to six weeks the change from the larva to the perfect curculio would be complete.

There are three distinct species of this insect, one smaller, and the other larger, than the plum curculio. The small one is nearly round, about half the size of the plum curculio, and is most found upon grapes. The other is full half a size larger, with a smooth shell and not near so numerous as either of the other kinds. Both of these insects, instead of making the well known crescent mark of the plum curculio, perforate the fruit by boring a small round hole, in which they deposite their eggs with the same certainty of destroying it, as the plum curculio.

During the time of jarring the trees, not a day passed without finding more or less of the two new species above described, in about the following proportion. Plum curculio, 25; small do., 8; large do., 3.

At the proper season of the year, by watching their movements patiently, large numbers will be seen emerging from the ground, and after surveying their position, will follow the instinct with which nature has endowed them, by crawling up the tree instead of flying. I have often checked their progress in this way, by putting a thick piece of pasteboard around the tree in the shape of an inverted funnel, but their wings were soon brought into requisition to overcome the difficulty. They can apparently fly a great distance, and in high winds, are blown in every direction; for after such winds I have often found them in different rooms, in the first and second story of the house.

Your readers will naturally say, all this is very well, but give us a remedy that will effectually guard against the enemy.

I can safely say, there is a remedy, and a philosophical one, which, if faithfully carried out, will insure good crops of fruit so far as curculio are concerned. First, then, cut off all means of *reproduction* by picking up every description of fallen fruit two or three times a week, and subjecting it to some process that will effectually destroy the grub or larva.

No advantage will be derived from this process the first year, for the curculio is already in the ground; but the satisfaction of having a good crop of plums the second year will well repay for all the trouble of picking up the fallen fruit.

I have studied the character and habits of this insect for the last ten years—have watched its movements for days and weeks—have tried every remedy published in the different agricultural and horticultural works, all of which have totally failed, excepting jarring the trees, and paving, and these have only proved partially successful.

By picking up every description of fallen fruit, no possible means are left for them to perpetuate their species. I am not aware that any means has ever yet been discovered, that the curculio can in any other way propagate its species, than by depositing its eggs in some description of fruit, and whatever fruit that may be, it must come in contact with the earth in such a manner that the grub can escape, and bury itself beneath the surface.

No one can resonably expect to be entirely exempt from this insect, as long as their neighbors are troubled with them, for some few will fly, or be blown into the trees under any and every circumstance, unless completely shielded by some covering, or net work.

The most complete and accurate description of this insect, according to my own observations, has been given by Mr. M. H. Simpson, of Massachusetts, in the June number of Downing's Horticulturist for 1850.

In this communication a remedy was given to guard against the curculio, which proved eminently successful with Mr. Simpson and a Mr. Young, of Kentucky, viz: syringing the trees with lime water. This remedy I have never tried.

Very respectfully, A Subscriber.

—*Western Horticultural Review.*

THE SCOTCH SHEEP DOG.

There are various races of dogs, which seem made by nature for certain definite purposes, to which they attend without training. There are the sheep dog, the pointer, the setter, the hound, the terrier, the spaniel and the bull dog, almost perfected by nature for one office alone. So fixed and peculiar are the traits in some races, that they will all attack an animal in the same way, and at the same point, though the young may not have the example of the old.

The sheep dog, in all ages and climates, preserves its peculiar properties, and though there may be several races, their characteristics are similar; and it is the least removed of any race from the natural type of the dog. For certain purposes this race has been modified, as by a cross with the mastiff a stronger race is produced to guard the flocks against wolves. When the dog is to serve as a guide rather than a protector, he is rather small, activity being an important object.

The muzzle of the shepherd's dog is sharp, the ears short and erect, the tail is long and bushy, like that of a fox; and he is generally covered with thick shaggy hair, particularly about the neck. He is usually black, or black prevails, mixed with gray or brown. The true sheep dog is regarded by the sheep as a guide and friend, but some of the crosses with ferocious races are an object of dread, and often injure the sheep by fright and violent attacks upon them, especially under a brutal shepherd. In such cases the dog is worse than useless.

The sheep dog is distinguished for his intelligence, fidelity, obedience and sagacity, performing naturally what other dogs would do only after a long course of training. In many cases this dog will do more in assisting a shepherd than several men, and often performs what it is not in the power of man to do. The following remarks, showing the fidelity, sagacity and intelligence of this valuable animal, will be read with interest.

Mr. James Hogg, the Ettrick Shepherd, living in his early days among the sheep and their quadruped attendants, and an accurate observer of nature, as well as an exquisite poet, gives some anecdotes of the colley, (the Highland term for sheep dog,) with which the reader will not be displeased. "My dog Sirrah," says he, in a letter to the editor of Blackwood's Edinburgh Magazine, "was, beyond all comparison, the best dog I ever saw. He had a somewhat surly and unsocial temper, disdaining all flattery, and refusing to be caressed; but his attention to my commands and interest will never again be equalled by any of the canine race. When I first saw him, a drover was leading him with a rope. He was both lean and hungry, and far from being a beautiful animal; for he was almost black, and had a grim face, striped with dark brown. I thought I perceived a sort of sullen intelligence in his countenance, notwithstanding his dejected and forlorn appearance, and I bought him. He was scarcely a year old, and knew so little of herding that he had never turned a sheep in his life; but, as soon as he discovered that it was his duty to do so, and that it obliged me, I can never forget with what anxiety and eagerness he learned his different evolutions; and when I once made him understand a direction, he never forgot or mistook it."

On one night, a large flock of lambs that were under the Ettrick Shepherd's care, frightened by something, scampered away in three different directions across the hills, in spite of all that he could do to keep them together. "Sirrah," said the shepherd, "they're a' awa!"

It was too dark for the dog and his master to see each other at any considerable distance, but Sirrah understood him, and set off after the fugitives. The night passed on, and Hogg and his assistant

traversed every neighboring hill in anxious but fruitless search for the lambs; but he could hear nothing of them nor of the dog, and he was returning to his master with the doleful intelligence that he had lost all his lambs. "On our way home, however," says he, "we discovered a lot of lambs at the bottom of a deep ravine called the Flesh Cleuch, and the indefatigable Sirrah standing in front of them, looking round for some relief, but still true to his charge. We concluded that it was one of the divisions which Sirrah had been unable to manage, until he came to that commanding situation. But what was our astonishment when we discovered that not one lamb of the flock was missing! How he had got all the divisions collected in the dark, is beyond my comprehension. The charge was left entirely to himself from midnight until the rising sun; and, if all the shepherds in the forest had been there to have assisted him, they could not have effected it with greater promptitude. All that I can say is, that I never felt so grateful to any creature under the sun as I did to my honest Sirrah that morning."

A shepherd, in one of his excursions over the Grampian Hills to collect his scattered flock, took with him (as is a frequent practice, to initiate them in their future business) one of his children about four years old. After traversing his pastures for a while, attended by his dog, he was compelled to ascend a summit at some distance. As the ascent was too great for the child, he left him at the bottom, with strict injunctions not to move from the place. Scarcely, however, had he gained the height, when one of the Scotch mists, of frequent occurrence, suddenly came on, and almost changed the day to night. He returned to seek his child, but was unable to find him, and concluded a long and fruitless search by coming distracted to his cottage. His poor dog also was missing in the general confusion. On the next morning by daylight he renewed his search, but again he came back without his child. He found, however, that during his absence his dog had been home, and, on receiving his allowance of food, instantly departed, For four successive days the shepherd continued his search with the same bad fortune, the dog as readily coming for his meal and departing. Struck by this singular circumstance, he determined to follow the dog, who departed as usual with his piece of cake. The animal led the way to a cataract at some distance from the spot where the child had been left. It was a rugged and almost perpendicular descent which the dog took, and he disappeared in a cave, the mouth of which was almost on a level with the torrent. The shepherd with difficulty followed; but, on entering the cavern, what were his emotions when he beheld the infant eating the cake which the dog had just brought to him, while the faithful animal stood by, eyeing his young charge with the utmost complacency! From the situation in which the child was found, it appeared that he had wandered to the brink of the precipice, and then either fallen or scrambled down, the torrent preventing his re-ascent. The dog by means of his scent had traced him to the spot, and afterwards prevented him from starving by giving up a part, or, perhaps, the whole of his own daily allowance. He appears never to have quitted the child night or day, except for food, as he was seen running at full speed to and from the cottage.

Mr. Hogg says, and very truly, that a single shepherd and his dog will accomplish more in gathering a flock of sheep from a Highland farm than twenty shepherds could do without dogs; in fact, that without this docile animal, the pastoral life would be a mere blank. It would require more hands to manage a flock of sheep, gather them from the hills, force them into houses and folds, and drive them to markets, than the profits of the whole flock would be capable of maintaining. Well may the shepherd feel an interest in his dog; he it is indeed that earns the family bread, of which he is himself content with the smallest morsel: always grateful, and always ready to exert his utmost abilities in his master's interests. Neither hunger, fatigue, nor the worst treatment, will drive him from his side, and he will follow him through every hardship without murmuring or repining. If one of them is obliged to change masters, it is sometimes long before he will acknowledge the new owner, or condescend to work for him with the willingness that he did for his former lord; but, if he once acknowledges him, he continues attached to him until death.

We will add another story of the colley, and proceed. It illustrates the memory of the dog. A shepherd was employed in bringing up soms mountain sheep from Westmoreland, and took with him a young sheep dog who had never made the journey before. From his assistant being ignorant of the ground, he experienced great difficulty in having the flock stopped at the various roads and lanes he passed in their way to London.

In the next year the same shepherd, accompanied by the same dog, brought up another flock for the gentleman who had had the former one. On being questioned how he had got on, he said much better than the year before, as his dog now knew the road, and had kept the sheep from going up any of the lanes or turnings that had given the shepherd so much trouble on his former journey. The distance could not have been less than 400 miles.

Buffon gives an eloquent and faithful account of the sheep dog: "This animal, faithful to man, will always preserve a portion of his empire and a degree of superiority over other beings. He reigns at the head of his flock, and makes himself better understood than the voice of the shepherd. Safety, order, and discipline are the fruits of his vigilance and activity. They are a people submitted to his management, whom he conducts and protects, and against whom he never employs force but for the preservation of good order. If we consider that this animal, notwithstanding his ugliness and his wild and melancholy look, is superior in instinct to all others; that he has a decided character in which education has comparatively little share; that he is the only animal born perfectly trained for the service of others; that, guided by natural powers alone, he applies himself to the care of our flocks, a duty which he executes with singular assiduity, vigilance, and fidelity; that he conducts them with an admirable intelligence which is a part and portion of himself; that his sagacity astonishes at the same time that it gives repose to his master, while it requires great time and trouble to instruct other dogs for the purposes to which they are destined: if we reflect on these facts we shall be confirmed in the opinion that the shepherd's dog is the true dog of nature, the stock and model of the whole species."

For the New England Farmer.

TAP ROOT OF TREES.

Mr. Cole:—Sir,—Will you please inform me through your paper what are some of the reasons for destroying the tap root of trees? We are taught by most writers upon the subject to cut off the tap root of fruit trees while young, and this instruction is followed in practice by nursery-men.

I have become convinced by experiments that trees with the tap root preserved will grow faster, endure a drought better, and stand firmer against heavy winds; and from observing trees that were never transplanted, I think they will grow larger, bear better, and live to a greater age. Now if these are facts, the doctrine taught is a very serious error, and ought to be corrected. If you will please enlighten us upon this subject, you will oblige your humble servant, Stephen Adams.

West Newfield, Me., June 11.

Remarks.—There is no advantage to the tree in cutting off the tap root, but it is done as a matter of convenience to the nurseryman; on the contrary it is a disadvantage to the tree to lose any part of the tap root; but this loss must inevitably occur, in some measure, as a consequence of transplanting.

A tree that stands where it started from seed, will be more vigorous, healthy, and of greater longevity, than if transplanted, other circumstances being equal. The shortening of tap roots is not a custom merely for the accommodation of nurserymen, but the common result, in some measure, of transplanting. Sometimes the nurseryman transplants trees twice before they become standards fit for sale. Perhaps he has stocks to set out only two or three feet high, and the tap roots are from one and a half to two feet long. Now he has a hard shallow soil, and the labor of deeping the soil and opening trenches, and setting 8 or 10,000 trees, with their tap roots, the full length, would be great indeed; and if the tap roots continued to extend downward, they could never be taken up entire. Sometimes nurserymen allow trees to remain where they started from seed, and this is often the cheaper way, but such trees are not so saleable. They have long tap roots, but not so good lateral roots as those that have been transplanted; and the purchaser, not inclined to dig deep holes, dislikes their appearance.

Another important consideration is the fact that with the greatest care and expense, it is impossible to transplant trees so as to preserve the tap root, and give it the same chance for growth which it has in its native spot. If the point of the tap root, to the extent of only one-eighth of an inch, become broken off, injured or dried, it will not extend downward, but become branch, or send off laterals. So in order to have all the advantages which nature designed from the tap root of the tree, the seed must be planted where the trees are to stand.

We have tried in vain to raise handsome, long straight beets by transplanting. We have taken them up when small, and with a spade run below the roots, so that we thought there was no loss or injury to any particle of root; and we have set them with the greatest care, opening the soft earth, and carefully laying in the plants with the roots perfect; but generally the root would not continue straight downward, but branch, and form imperfect roots, showing a great contrast at harvest between those that were transplanted and those that were not.

For the New England Farmer.

CULTURE OF THE CRANBERRY.

Mr. Editor:—A few weeks since a brief notice was given of the upland culture of the cranberry, by the Messrs. Needham, of Danvers. As the "proof of the pudding is said to be in the eating," so may it be with the cranberry. I have lately received a box of the fruit, grown upon their grounds the last season, longer and fairer than cranberries usually are. They appeared more like ripe cherries than cranberries. They cooked tender, required a moderate proportion of sweetening, and in every respect were superior to the meadow cranberry.

Whether it will be practicable to extend this culture in a manner *to pay*, I am not sufficiently advised to express an opinion. It is certainly true that the cranberry can be grown upon the upland, and that the quality of the fruit is greatly improved by so growing. When the habits of the plant are fully understood, and proper care shall be taken to guard it against the frost of winter, I see no reason why it should not be as successfully cultivated as the strawberry. About one bushel to the square rod of land might thus be raised;—and there can be no doubt, there will ever be a quick market for all that are raised.

The cranberry is ordinarily found on grounds overflowed by water in the winter. This overflowing, in a measure, protects it from frosts. Hence the inference has been, that such overflowing was essential to their growth. The experiments that we have seen would seem to prove, that a slight covering of meadow hay, or bushes of evergreen, or other light substances not burdensome to the plants, would be an equally good protection.

Esteeming the cranberry one of the greatest luxuries for the table, indigenous to our own soil, healthy as well as palatable, I have thought a circulation of the above facts, relating to its culture, might awaken attention to the subject. Heretofore, usually plants have been transferred from the meadow to the upland; but if they could be raised from seed, or taken from nurseries, as are the plants of the strawberry, it is apparent that they would be best adapted to their position. Strict care in this, as in other cultures, should be had to exclude all weeds and meddlesome grasses. P.

Danvers, June 20, 1851.

Remarks.—Cranberries grown on high land are hard and firm, and keep far better than those raised on wet land; and yet they cook soft and are of the finest quality. We picked a quart of cranberries of spontaneous growth on a poor gravelly ridge, and set them in a closet in a room that was kept warm through the winter, day and night. The next spring almost every one was sound, and had

hardly shriveled. It is a curious fact that cranberries, of spontaneous growth on high land, endure the cold of winter, and produce well without any protection during the winter, whilst those cultivated on high land seem to need protection.—EDITOR.

For the New England Farmer.

FARMERS SHOULD COMMUNICATE—COLOR OF HOUSES.

MR. EDITOR:—I see that you have extended a general invitation to your readers to communicate freely whatever they may feel disposed to offer to the columns of the "Farmer;" that it is your wish that they may do so. I hope it will induce many who have heretofore been silent, to cast their mite into the treasury of practical information and thereby do something, even if it be ever so little, towards enabling the tillers of the soil to arrive at the best mode of doing the things appertaining to their invaluable branch of industry, which is the very fountain-source of all life's enjoyment and luxuries.

I am well aware that my unskilled pen can contribute but little or nothing that will prove interesting and useful, or be worthy of the space it would occupy in your valuable publication; yet if I could but be the feeble means of awakening a desire and willingness,—that will eventually be followed up by the act,—on the part of older, and consequently more experienced farmers than myself, to spread the result of their own labors and experiments broadcast before the eyes of the great farming community, where all may read, if they will, and profit thereby; if I can do any thing towards bringing about "a consummation so devoutly to be wished," I hope that you nor I, Mr. Editor, will ever have cause to regret that I have again seen fit to trespass upon your time and patience.

Let our farmers keep an accurate account of the management and profits of their crops, &c., and prepare and send in the results for publication from time to time; let the practice become general, and the benefits arising from it would very soon be made apparent in the growing interest it would awaken in many who, "sick of farming," as they say, plod on in the same beaten path which their fathers trod before them, strangers to all that noble ambition and honest pride, that fills the expanding heart of the progressive farmer, as he casts his eye over his fertile domain that so amply repays him for all the expense incurred and all the labor bestowed, and feels that he is indeed "Nature's nobleman!"

I am sorry that my article on the "Color of Houses" did not, and could not, meet with your approval, for I consider pure white to be *the color* for our dwellings. But we cannot all think alike. It is so ordered, and wisely, and "'tis well;" but the arguments brought against my favorite *white paint* in the article of your correspondent, "J. B. D.," which appeared in the "Farmer and Rambler" of the 5th, are in my opinion "as light as vanity." He says, "Pure white will not harmonize with nature at all." True. But so far from this being an argument against its use, I consider its weight to bear exactly in the opposite direction. The *contrast* between the face of nature and "pure white" is just the reason why our buildings look better white than colored. At least *I* think so; "*J. B. D.*" thinks differently, as he has a perfect right to do, of course. Argument second reads—"When approaching a situation of which a great white house forms the foreground, the beauties of surrounding field and meadow can never be properly appreciated in consequence of the 'horrid glare,' particularly on a bright summer's day." Comment is unnecessary; let each reader weigh each argument in the nicest scales, and then draw his inference from the well of *truth*. "Thirdly,—When viewing the same from a *distance* the eye is irresistibly drawn to the house, and the mind cannot be divested of the idea that it is a great blot on the fair face of nature." Now this is worse than ever, for it gives unmistakable evidence that there is a *very weak* spot somewhere—an entire want of self-control; or, perhaps I should say, a complete captivation of "the eye" by this same "great blot on the fair face of nature!"

After quoting a paragraph from one of Downing's works, "J. B. D." concludes his communication by asking the following question—"If A. J. Downing is not authority in matters of taste, pray who is?" I suppose every one has a perfect right to consult his *own* taste, if he sees fit to do so; and I hope that all will exercise this privilege in a spirit of manliness that will suffer no dictation, from any one. I would not for a moment entertain the thought that A. J. Downing even *wishes* to dictate; but at the same time I cannot but observe that "J. B. D.'s" article gives strong indications that he depends too much on Downing. Let him read "A.'s" article in the "Farmer and Rambler" of May 17th, on the "Effects of Coal Tar on Fruit Trees," and learn a lesson therefrom. Infallibility enters not into the nature of erring mortals. J. W.

Winchester, Mass., June 9, 1851.

For the New England Farmer.

PROFITABLE COW.

MR. EDITOR:—I will give you an account of a cow which I have. I commenced weighing her milk May 17th, and continued 28 days. I found that it weighed 1264 1-2 lbs. I made from the cream produced in 26 days, 43 3-4 lbs. of butter, as handsome as any person ever saw. It may be seen by calling on Col. Aaron Brigham, in front of the market.

The cow is less than middling size; a native, full blooded Yankee—none of your John Bulls. Her age is 11 years. She has had nine calves, only one of which is a heifer. She is 3 years old, and has had 2 calves. She makes from 6 to 7 lbs. of butter per week. I milk three times per day, and give my cow 1 quart of meal in slops, per day.

Yours, &c., WILLIAM F. GLEASON.

Marlboro', June 15, 1851.

REMARKS.—Mr. Gleason seems to depend on the heifers of this cow for a continuance of her good properties; but he should consider that it is an established principle among breeders, and one which is recognized generally among observing men, that the peculiar properties of any animal descends in the opposite sex. He should raise a fine bull of this cow, and look for her good properties in the

heifers that descend from him, rather than in the heifers direct from this valuable cow.—EDITOR.

THE POTATO ROT.

We have been requested to copy the following letter, addressed to his Excellency the Governor:

Lowell, April 2, 1851.

The undersigned claims that he has discovered a certain and practical remedy for the disease called the potato rot, and that he is entitled to the reward offered by the Legislature of the State of Massachusetts. He says the disease is caused by a small insect, or black bug, which preys upon the leaf until it destroys the vine and causes the root to rot. He has made ample investigation to satisfy him of the fact.

The remedy he proposes, having proved it fully himself, is to dissolve lime in water, and with a sprinkling pot adapted to the purpose, to sprinkle all the vines with the solution, as soon as there is any indications of the presence of the insect, which is always indicated by an appearance of the rust. This rust is merely the perforations made by the bug. The insect commits its ravages near sundown and in the night, and can be best discovered near the close of the day. The solution may be very weak, but must be repeated once a week after the appearance of the insect.

He thinks that two casks of lime to the acre would be sufficient. PHANUEL FLANDERS.

To his Excellency, George S. Boutwell, Governor of Massachusetts.

WHAT IS THE MOST VALUABLE CROP?

MR. EDITOR:—In the Farmer of May 1st, I noticed a communication from a subscriber, desiring information on the subject. If you think the following lines will be of any benefit to him, or any of the numerous readers of the Farmer, you are at liberty to publish them.

In regard to what is the most profitable crop, I would say much depends on the season, and the character of the soil which you wish to cultivate. On dry, sandy loams, potatoes or wheat would not be likely to yield a very great profit; but such land under proper management would produce large crops of Indian corn, rye, buckwheat, or clover.—In a hot, dry season, our grass and grain crops would suffer from drought, while we might obtain an excellent crop of corn; but in a cold, wet season, this would be reversed. Considering these circumstances, I believe it is best to raise a variety of crops, selecting such soils as would be most congenial to the nature of the crops. I believe that in whatever circumstances a farmer may be placed, the grass crop is the most important, if not the most profitable; for we depend on this to keep our stock through our long and cold winters; every increase of this adds to the manure heap, and consequently to the productiveness of the farm.

But my main object is to state the few facts I have learned in relation to this subject. For the last two years I have kept a journal of the operations on the farm, in order to ascertain the real and comparative value of each crop. From this I learned that some crops, which before I considered the most profitable, yielded less net profit than some others. Below is a tabular account of the cost and value of the crops, which we raised in the years 1849–50; and also the number of loads of manure applied, containing thirty bushels each.—In the cost is included the value of the seed, and labor at the price paid, (50 cts. to $1,00 per day,) also the use of tools; board is not included.

1849.

Crops.	*Cost.*	*Value.*	*Manure per acre*
Hay,	$2,18 a ton.	$8,00 a ton.	
Wheat,	1,65 a bu.	1,25 a bu.	20 lds. yr. before.
Winter Rye,	75 "	90 "	10 " " "
Corn,	40 "	85 "	20 loads.
Potatoes,	23 "	30 "	18 "
Apples, grafted,	4½ "	50 "	

1850.

Hay,	$2,00 a ton.	$9,00 a ton.	
Wheat,	83 a bu.	1,25 a bu.	18 lds. yr. before.
Winter Rye,	89 "	90 "	20 " " "
Corn,	40 "	83 "	27 loads.
"	96 "	83 "	35 "
Potatoes,	25 "	40 "	13 "
Apples, grafted,	4½ "	50	

It appears from the above that the apple gives the most net profit. In the table the cost of gathering the apples, which was done by hand, is all that is included. If pruning and other labor had been reckoned, it might have doubled the cost. Except the apples, the hay stands highest in point of profit. Indian corn stands next. It will be seen by the table for 1850, that there were two pieces of corn, one of 40, and the other 76 cents per bushel. The first was planted on old ground, the other on greensward,—the latter was also injured by being planted too thick.

It will be recollected that we had a severe drought in 1849, which injured the grass and grain very much, while the corn and potatoes suffered less. In 1850 potatoes suffered badly from the rot.

These are, however, the result of only two years' observation on one small farm. Other seasons and places might give different results. I should be happy to hear from others on this subject, and I would advise all to keep a journal, note down their experience and observations, and publish them in the Farmer.—*Maine Farmer.*

☞ You may glean knowledge by reading, but you must separate the chaff from the wheat by thinking.

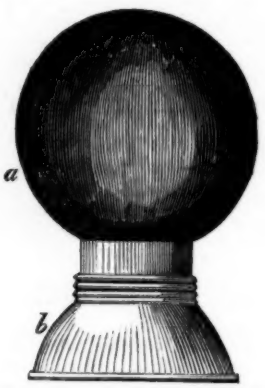
☞ Duty faithfully performed opens the mind to truth.

Mechanics' Department, Arts, &c.

DR. FARADAY ON CHIMNEYS.

At the Royal Institution, in a series of lectures on chemistry applied to domestic purposes, Dr. Faraday has thus philosophized on "a chimney." Various illustrations were given to show the importance of the functions of the chimney. A parlor fire will consume in twelve hours 40 lbs. of coal, the combustion rendering 42,000 gallons of air unfit to support life. Not only is that large amount of deleterious product carried away and rendered innoxious by the chimney, but five times that quantity of air is also carried up by the draught, and ventilation thus effectually maintained. The force of a draught was illustrated by a descending flue. A colored flame was held near the end of a tube bent like an inverted syphon. As soon as the tube was heated, the ascent of the air within the longer arm of the tube drew the flame downwards into the shorter arm with considerable force. Since the as-

cent of smoke up the chimney depends on the comparative lightness of the column of air within to that of an equal column without, the longer the chimney the stronger will be the draught, if the fire be sufficiently great to heat air; but if the chimney be so long that the air is cooled as it approaches the top, the draught is diminished. A case of this kind occurred at a lighthouse on the Isle of Portland. The chimney which ventilated the building and the lantern was carried on the outside, and in the winter time the draught was so much impared that the windows became dim and the lights obscure. An attempt had previously been made to remedy the defect by lengthening the chimney; but that, of course, had made it smoke all the more. The application of a jet of steam to increase the blast of locomotive engine furnaces was illustrated. The lower end of a bent glass tube was placed in a dish which contained colored liquid, the upper end being inverted into a larger and horizontal tube. A jet of high pressure steam directed through the larger tube caused such a rush of air to supply the place of the air expelled by the steam, that the colored liquid rose to the top of the tube. The mechanical force of a jet of high pressure steam was shown by causing it to sustain an egg, which was seen dancing about in the air without anything apparent to support it.—*Scientific American.*



RESTORATION OF SIGHT.

Mr. J. Ball, of New York, has lately patented an instrument for the restoration of sight to aged persons, which promises to be very useful in remedying one of the most trying ills of old age. The instrument,—of which we give an engraving above,—is very simple, consisting merely of a hollow India rubber ball, *a*, attached to a cup, *b*, which fits on the eye. The air is first partially expelled from the ball by pressure between the fingers, before the cup is applied to the eye. On removing the pressure the ball distends and a partial vacuum in produced, drawing on the eye and tending to restore its convexity. The pressure is regulated according to pleasure. Prof. Bronson, and other eminent occulists, accomplish the same result by manipulation, but probably not so efficiently. The price of the instrument is $2,50.

The following is the explanation of the inventor:

"The cause of the decline of sight is the flattening of the lens or cornea of the eye; and the object of this instrument is to restore the convexity if lost, and to preserve it if first beginning to decline. Having tried the effect upon myself, I can speak with confidence, for from having been unable for the last six years to read or discern the form of any letter, I can now, after a trial of six months, read without the aid of glasses. This is effected by a simple instrument, made upon philosophical principles, by which the cornea of the eye is gradually raised to its original convexity, causing the focus to impinge upon the retina without the aid of convex lens; and will be accomplished ten-fold more rapidly than the sight declined. The application will be made once or twice a week with less trouble than that of shaving, and no loss of time, as it is most conveniently applied after retiring to bed."

ON FITTING HORSE-SHOES HOT.

The following is from a review of the Bulletin of the Central Society of Veterinary Medicine, published under the direction of its committee, and the editorship of M. H. Bouley, the Annual Secretary —in the London "Veterinarian:"—

Although hot shoeing has had some enemies in our country we know of but few advocates for the cold plan. M. Delafond, the author of the paper before us, concurs with the committee in the rejection of the *podometre* or foot-measurer, the invention of M. Riquet, and proceeds to inquire if there is any serious or real objection to fitting shoes hot to the feet.

Fitting shoes hot—hot shoeing as it may be called —is said to heat or burn the sole, to dry the hoof, to incline its fibres to separate, to incite inflammation in the internal tissues of the foot, and to produce organic alterations in them of a grave and hardly remediable character. It was not until the middle of the eighteenth century that hot shoeing came into practice, and the first author we find complaining about it is Lafosse, who, in his "Nouville Pratique de Ferrer les Chevaux," 3d edition, published in 1758, has spoken of such accidents under the names of heated and burned hoofs. And his son (Lafosse, jun.,) has well described them in his "Guide du Marechal," and subsequent works.

If burning the hoof is an evil consequent upon hot shoeing, is it a frequent occurrence? The committee and M. Reynal have already come to the conclusion that it is not, and I am quite of their opinion. In order, however, to assure myself further than the mere *on dit* practice of the forge on this point, I resolved to institute a series of experiments on the conducting power of horn of caloric; and the results have proved as follows:

1. That the conducting power of the crust is inferior to that of the sole; whence we derive the indication in practice, that it is absolutely essential that the heated shoe should not be allowed to come in contact with any substance but the crust.

2. That caloric is transmitted tardily either through crust or sole.

3. That it is not before the elapse of three, four, or five minutes after combustion that the thermometer indicates the highest degree of heat in the hoof.

4. That the thinner the horn of the crust is the

more heat becomes transmitted through it to the parts it envelops.

Having thus assured myself of the conducting power of heat of the hoof, I now sought to ascertain the *amount* of heat it was capable of transmitting to the living tissues enclosed by it, as well as the degree of heat required to produce *burning*.

Before, however, I proceed to give an account of these experiments, I wish to show the anatomical structure of the parts situated underneath the sole and the crust, and particularly of those subjacent to the points of junction between these two parts of the hoof.

When, through maceration, the horny sole has become detached from the parts beneath it, we come upon the sub-ungular tissue which Lafosse and Bourgelat have named the *fleshy sole;* and which our honorable president, M. Girard, has designated, after Malpighi, *reticular tissue*, upon whose surface we observe numerous slender prolongations, filiform, which have gone under the names of *fibres, filaments*, *villosities*, and in later times *papillæ*. Now, those villosities or papilæ, which, on account of their vasculo-nervous organization, I shall denominate *villo-papillæ*, are extremely numerous over the entire surface of the reticular tissue, and particularly around the circumferent border of the coffin bone, where they come opposite to the parts burnt by the hot shoe. These villo-papillæ, extremely important to be known, and which even up to the present hour authors have not described with sufficient minuteness, vary from four twenty-fifths to six twenty-sixths of an inch in length throughout the entire circumference of the fleshy soil.

Another very remarkable disposition, as it regards hot shoeing, and one which has not, that I know of, been pointed out, is that every plait of the laminated tissue, before it terminates in the circumferent border where it unites with the velvety tissue of the sole, sends off numerous papillæ in digits or teats of no more than four twenty-fifths to six twenty-sixths of an inch in length.

BLASTING ROCKS.

Blasting rocks by the old process consists in making holes in a proper spot by using a heavy iron bar, of which the strokes produce the desired effect; the hole then is cylindrical and rather conical, being wider at the top by the friction of the rod bar against its sides. The power has not then all the effect which it could have, and never can be used in large quantity. A process used with full success, is this: a deep hole is first made in the above manner, then a glass tube is inserted, and strong sulphuric acid mixed with a small portion of water is poured in; the acid dissolves part of the stone; the sulphate is then extracted, and the bottom washed by sending down some water, which is pumped out by any means whatever; this operation is repeated as many times as is necessary to produce at the bottom of the hole a kind of pouch, which is well dried by using rags or anything similar. This pouch is then filled with powder by the common process of ramming, and then blasted. The quantity of powder being as large as it may seem necessary, permits to blow up, with a single charge, as much as with ten of the old process, and to have larger blocks, if desired.

Ornamental Bricks.—A style of ornamental bricks has recently been introduced into England, and patented by Messrs. Bowers, Challinors & Wooliscraft, of the Staffordshire Potteries. These brick, or rather they are a kind of pottery ware, are made, the Scientific American says, from a mixture of clay and other ingredients, calculated to vitrify with the clay. They can be painted and grained with the utmost facility, so as to imitate any kind of oak, rose, satin, or other woods, or sculptures in stone, or be gilded without injuring the brilliancy of the gold leaf. They may supply the place of wood carving in architectural decoration, and, from their fire-proof nature, add to the safety of the buildings.

Flexible Ivory.—M. Charriere, a manufacturer of surgical instruments in Paris, has for some time been in the habit of rendering flexible the ivory which he uses in making tubes and other instruments. After giving the ivory the desired form and polish, he steeps it in hydro-chloric acid diluted with water, when it becomes flexible, elastic, and of a slight yellow color. In the course of drying, the ivory becomes hard and inflexible, but its flexibility can at once be restored by wetting it with a wet sponge; some pieces of ivory have been kept in a flexible state, in the acidulated water, for a week without being either too much softened or injured in the texture.—*Scientific American.*

Ladies' Department.

WOMAN'S SPHERE.

Since the first settlement of America, there never has been a period when women were in so much danger of sinking into a state of mental and bodily weakness, as at the present. The first settlement of the country called for all the strength and heroism that could be developed in human hearts. The women who shared the lot of the pilgrims, met this demand with a moral grandeur seldom equalled in human history. They grew strong—strong to do, strong to endure.

They communicated to their daughters their own glorious spirits, their own wide and exalted sphere. The revolution came, and these children and grand-children of the pilgrim stock boldly thought and acted as though they had a deep and glorious interest in the whole sphere of human rights and duties.

When, in accordance with the then acknowledged duty of self defence, the heroes of '76 buckled on their knapsacks and shouldered their rusty muskets, the wives and daughters assumed the responsibility of directing all the concerns at home.—They even tilled the ground, in many instances, and harvested its fruits, while the husband and his sons contended with the sword for freedom.

They were politicians too, and thought and spoke with glorious independence upon the subject of human rights.

When that period had expired, there were wasted fortunes to repair; the demands of a young and rising State must be met with honor, and there was no room to spare woman then from a generous participation in all the cares and duties of humanity. Her sphere, if not the same as that of her husband's, must at least be parallel.

As soon as the land was fairly established in its prosperity, the fever of emigration seized the mul-

titude, and again woman was required to do and dare. Nay, it was not thought unwomanly for her to follow the fortunes of her husband to the deep shades of the forest, and there to share with him the toils that were destined to convert the wilderness into fruitful fields. She walked for miles on missions of mercy without reproach, piled brush, and, if need be, aided in sowing the fallow, and in reaping the harvest, and no one chided her for her intrusion upon the reserved rights of the other sex.

But now when plenty and even luxury are to be found through all these once savage wilds, there is a strong tendency to limit and define on one side, and to resist on the other.

We believe there has been, of late years, a strong tendency on the part of many, to impress the minds of women with the idea that they were not made to be useful; and from this may have been deduced another false idea, namely, that the discharge of ordinary domestic duties does not, in itself, entitle woman to consider herself equally employed. She feels that her life is not a productive one, because she is mainly engaged in the manufacture of those articles immediately consumed by those around her. Her labor is rarely counted out in dollars and cents, and since it is coined in no mint, it is accounted of little value.

Many a woman pines because she has no great object before her. She feels no strong current sweeping through her veins, impelling forward some mighty work that shall be seen and admired by others. She sees her husband go forth daily to some kind of stirring enterprise: he meets his fellows and they bow to his power: his genius finds applause, and his labors reward, while she sits nursing a fretful infant, repaid by no appreciation, encouraged by no praise. But his is child's play compared with the grandeur of the task that lies before her. And if her labors meet with no well-coined currency in exchange, it is because the world has none in which its value can be estimated. Let no woman sink down in despondency, saying, "My labors all go for nothing in this great scale of human efforts." They are too great for mortal computation, and hence unestimated rather than overlooked. H. M. Tracy.

—*Albany Cultivator.*

HOME.

He who has no home has none of the pleasures of life; he feels not the thousand endearments that cluster around that hallowed spot to fill the void of his aching heart and while his leisure moments in the sweetest of life's joys. Is misfortune your lot? you will find a friendly welcome from hearts beating true to your own. The chosen partner of your toil has a smile of approbation when others have deserted, a hand to help when others refuse, and a heart to feel your sorrows as her own. Perhaps a smiling cherub, with prattling glee and joyous laugh, will drive all sorrow from your care-worn brow, and enclose it in the wreath of domestic bliss.

No matter how humble the home may be, how destitute its stores, or how poorly its inmates are clad; if true hearts dwell there, it is yet a home—a cheerful, prudent wife, obedient and affectionate children, will give their possessor more real joy than bags of gold and windy honor.

The home of a temperate, industrious, honest man will be his greatest joy. He comes to it "weary and worn," but the merry laugh and happy voice of childhood cheers him; a plain but healthy meal awaits him. Envy, ambition, and strife have no place there; and, with a clear conscience, he lays his weary limbs down to rest in the bosom of his family, and under the protecting care of the poor man's friend and help.

RECEIPT FOR BURNS.

As I see many receipts for various cures in your paper, I send you one for burns:—

Take lime water as strong as it can be made, and add to it as much alum as it will dissolve, after which add one ounce of sweet oil, which will turn it to a jelly, like opodeldoc, if the lime is strong enough. This should be kept by every family in a tight bottle in some place where it cannot freeze, and should be immediately applied. A child of mine got her clothes on fire in the absence of the family, and when discovered the skin was almost all burnt off her face and neck; we had to make the preparation, but in fifteen minutes after it was applied, the fire was extracted and the child at ease. I have tried most of the receipts published in your paper, but nothing have I found to equal the above. If rightly made and properly applied it will extract all the burning heat in ten minutes.

Hiram Root.

[We have been acquainted with the use of lime water and olive oil salve, for burns, for more than twenty years, but we never saw it made up with a mixture of alum. It is a very good salve. Poultices of linseed meal are the best remedies that we ever saw applied to burns.—*Scientific American.*

☞ The New England Farmer is published *every other* Saturday by John Raynolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

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